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ABSTRACT

Since its first year of operation, Coastline Community College (CCC) has granted students credit based on military experience, licensure, occupational training, credit-by-examination, and assessment of prior learning. In spring 1982, a study was conducted to compare the cost-effectiveness of granting credit for experience with that of the traditional system of granting credit. Two groups of 167 associate in arts (AA) degree, occupational students were sampled to determine whether there was any significant difference in the academic achievement or completion rates of the total group of students who had received experiential credit at CCC and a randomly selected group of students enrolled in the spring 1981 semester. While the study revealed no significant difference in the grade point averages of the two groups, there was a significant difference in the AA completion rates of the student groups: one in three of the students who had received experiential credit and one in 24 of the students who had not received such credit had received the AA degree by spring 1982. Based on the findings and the low cost per unit of granting experiential credit at CCC, it was concluded that granting such credit is cost-effective both in terms of student and community costs. The study report includes background information on CCC's experiential credit policies; a brief literature review; information on study objectives, methods, and results; and recommendations. (HB)

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Analysis of the Cost Effectiveness of Awarding Experiential Learning Credit at Coastline Community College

Coastline Community College

Office of Admissions, Guidance and Information Services

Research Report No. 19

Spring 1981-1982

J. E. Riedel, Ed.D.

Completed in Cooperation with the League for Innovation in the Community Colleges.

Coast Community College District

July 28, 1982

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INTRODUCTION

Coastline Community College implemented a system for granting credit for prior learning in its first year of operation. The first phase of the system consisted of granting the usual credit for military experience, College Level Exams and American Council of Education Approved coursework taken through business and industry. For the first time, however, in any California Community College, Coastline also included licensure credit in addition to the above sources of experiential credit. Granting licensure credit, by allowing the same number of credits which are required to obtain the license through a community college program, soon proved to be the most popular of all sources of experiential credit. Table I lists the numbers of semester units granted in the first five years for experiential learning, and the estimated cost per unit to the college for granting the credit. As can be seen, licensure credit accounts for more than twice the amount granted for military experience and training; the next most popular source of prior learning credit.

Table I: Experiential Units Awarded at Coastline 1976--1981 and Estimated Cost Per Unit to the College

	Units	Cost Per Unit Awarded
Military	955	1.00
APL	216.5	64.00
Credit by Exam	18.5	.05
College Level Exam Program	486	.05
Licensure Credit	1,916	.05
USAFI	93	.05
Other	46	.10
Total Units	3,731	

The second phase of Coastline's System of granting experiential credit was an outgrowth of licensure credit. Many certificates granted by Coastline do not result in state or federal licensure. A number of business certificates such as management or supervision are typical. In order to further expand the granting of experiential credit into such areas and at the same time maintain tight quality control over allowed credit, Coastline established the outcomes or competencies of a number of our certificates and made it possible for individuals to petition for credit if they satisfactorily documented that they possessed those competencies. This added dimension to credit for prior learning was called the Assessment of Prior Learning. (APL).

There is continuing controversy regarding granting college credit as implied above in the reference to quality control over crediting experiential learning. Community colleges generally accept credits granted by any other accredited Community Colleges, including credit for experiential learning. Private four year institutions may or may not accept such credit depending on their own policy. State universities generally do not accept such credits although in the case of Coastline's credit for APL-- a local state university accepted the credits on the same basis as credit-by-exam. The University of California in all branches excludes completely experiential credit granted by other institutions. It can readily be seen that a student who has received credit for his prior learning can find him/herself in a wide spectrum of situations with respect to Bachelor Degree plans. An important aspect of the controversy over granting college credits for prior learning concerns the student. Because of advanced placement, this individual has not been subjected to some of the screening processes that regular students are; is she/he different in any way from regular students? Does this student have a greater or lesser aptitude for subsequent college course work? Is she/he more or less

motivated to achieve? A third and less controversial aspect of granting experiential credit concerns its cost effectiveness. Is it in the financial interest of the college and community to grant experiential credit? This study, by comparing a random selection of regular students with those students who received experiential credit, obtained results which may help in answering a few of the above questions.

PROBLEM

The question that was examined was as follows: Do students who obtained credit for prior experiences, such as military, licensure, occupational training, credit-by-exam, and assessment of prior learning attain higher academic achievement than regular students of similar background, and given the cost of administering the program at Coastline, is the program cost effective in comparison to the traditional system of granting credit?

PURPOSE

The purpose of the study was designed to research and evaluate two different student populations in an effort to find out if one student population performs academically less, equal, or better than the second. The results of the research should demonstrate if there are any significant differences between the student groups and provide information regarding the cost effectiveness of the system for granting credit for experiential learning.

METHOD OF INVESTIGATION

A comparison was made between two groups of students all of whom were occupational AA degree candidates. The experimental group was comprised of all students who received experiential credit through any of the methods offered at Coastline. The control group consisted of an equal number of occupational students, chosen at random from the Spring '81 list of students. Academic achievement was defined as the group grade point average. AA degree

completion was a second dependent variable used to measure academic achievement. The awarding of experiential credit by any of the means listed on page 1 was the independent variable of the experimental group.

The following null hypotheses were tested:

1. There is no significant difference between the academic achievement of those students who received experiential credit and comparable occupational students who did not.
2. There is no significant difference between the AA degree completion rate of those students who received experiential credit and comparable occupational students who did not.

BACKGROUND AND SIGNIFICANCE

Extensive literature is available on the subject of non-traditional students and their special educational needs. Emphasis, however has been placed on what adjustments should be made for these student types, identified by one study as the persons in mid-career change, senior citizens, returning women, disadvantaged students, high school students and middle management personnel.[1] Little research has been done that points toward other than assumed differences between the non-traditional and the traditional students.

Coastline acted on assumptions similar to those of Knowles[2] in offering one of its extensive programs to serve mature adults and middle management personnel. The program devised was a system of granting credit for prior learning, and it assumed that only individuals who already possess college level learning and skills, being more mature, more motivated and more goal oriented, could take advantage of the program. The assumption would find support in Chickering's study of developmental change which found that the immaturity of young students in ego development, conceptual development and moral development constrains the uses of both ideas and experience.[3] (underline by author)

[1]American Association of State Colleges and Universities, Resource Center for Planned Change, Programs for New Clientele, Washington D.C.: Author, 1977.

[2]Knowles, M.S. The Modern Practice of Adult Education: Andragogy Versus Pedagogy. New York Association Press, 1970.

[3]Chickering, A.W. Developmental Change as a Major Outcome. In M.T. Keeton and Associates, Experiential Learning: Rationale, Characteristics and Assessment. San Francisco: Jossey--Bass, 1976.

Further support for the assumption that older adults may be more successful in learning than traditional students can be found in the important study on individual growth and competence in the adult years by Knox. As can be seen in Figure I, as reported by Knox, the 40-60 year old adult, in comparison to the 20-25 year old, has distinctly higher learning powers in three areas; acculturation, "Chrystalized Intelligence" and "Fluid plus Chrystalized Intelligence."[4]

Chrystalized intelligence is defined as "the ability to perceive relations and to engage in informal reasoning and abstraction based on a familiarity with knowledge of the intellectual and cultural heritage of society. Chrystalized intelligence is based on acculturation, including formal education and active information seeking (Cf experiential learning, Author), in which the individual mixes fluid intelligence with cultural knowledge.[5]

Fluid intelligence consists of the ability to perceive complex relations, engage in short term memory, form concepts, and engage in abstract reasoning."[6]

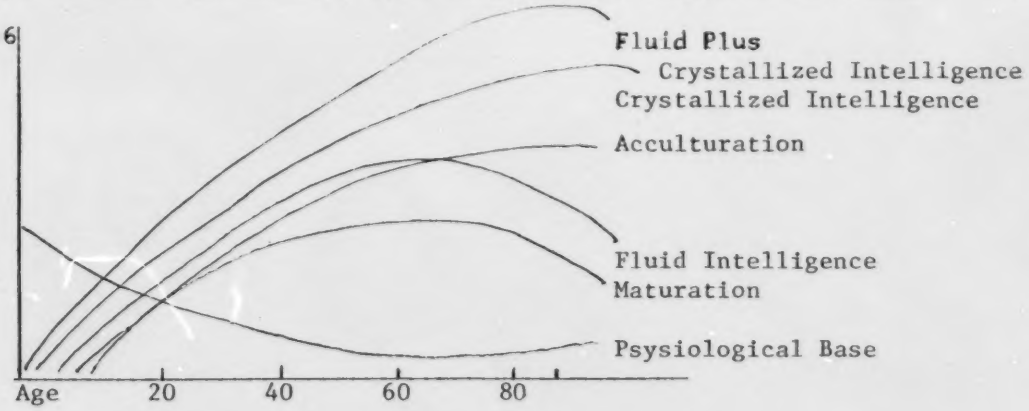
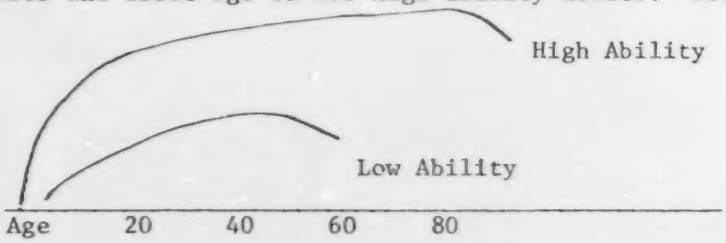


Figure 1

[4]Knox, Alan B. Adult Development and Learning, Jossey-Bass, San Francisco, 1977.
[5]Ibid, P. 420.
[6]Ibid, P. 419.

While the intelligence of adults peaks in later years as indicated above, the learning ability of adults peaks at about 35 years for low ability adults and about age 65 for high ability adults. See figure 2.

Figure 2



[7]

In 1980 Coastline Community College, as part of a Productivity project sponsored by the League of Innovation, decided to study its system of granting credit for prior learning in light of the cost effectiveness of staff utilization involved in the project. It was hoped that the study would bear out the fact that adults with appropriate experience would be more successful in college and would thereby contribute to a more effective use of staff in terms of cost per unit. A preliminary review of the cost of assessing prior learning alone indicated as much. Table II is a summary of the cost per unit of awarding credit for prior learning through Coastline's APL portfolio assessment system.[8] It should be noted that of the total cost per unit of $64.00, 40 percent was used to prepare materials. This one time cost is resulting in a gradual reduction in cost per unit of credit awarded, as more students receive credit for prior learning. Grouping all methods of awarding experiential credit, (See Table I) the average cost per unit of experiential credit from 1976 to 1981 was $3.45. This compares to a rising cost of from $52 to $73 per unit for regular instruction during the period of the study.

[7] Ibid, P. 417.

[8] Coastline Community College, AGIS, Assessment of Prior Learning-Progress Report and Recommendations. Unpublished Report 1981

TABLE II

BUDGET SUMMARY OF ASSESSMENT OF PRIOR LEARNING AT COASTLINE COMMUNITY COLLEGE

Year	Funding	Teacher	Task Force	Facilities	Misc.*	Outreach	# of Portfolios	# of Units	Cost Per Unit
77-78	$3,000 Disc. Grant	1224 Utter	Bus. Mgmt. Pers. Mgmt. Mktg. & Sales $1,240	$232	$304	--	1	18	$166
78-79	$3,800 AB 1173	1224 Utter	Secr. Acct'g. $1,108 Gen Ofc & Leg Secr. $498 Travel Agency $498	$232	$240	--	1	27	$141
79-80	$5,000 AB 1173	1353 Raphael	Real Estate & Revision of Mgmt/Superv $2,262	$232	$581	$572	5	33	$151
Fall '81 & Spring 1st 9 wks	- o -	1716 Raphael	- 0 -	$405	- 0 -	--	9	138.5	$15
Total	$11,800	5517	$5,606	$1,101	$1,125	$572	16	216.5	$13,921 / $64

* Includes travel, printing, and conference attendance

Coastline's proposed objectives for the study included finding evidence that the student who received experiential credit was:

1. more goal oriented
2. higher in G.P.A.
3. more advanced in educational plans
4. likely to use experiential credit to advantage in obtaining a degree or certificate
5. saving money for himself and the community

As Valley has indicated; however,

> "...it is a bit more complex to trace the educational fiscal consequences of credit for prior learning that sets the stage for a matriculated student to decide ultimately on a different program of study than was originally intended. And if we ask whether recognizing prior achievement affects motivation levels of students and causes achievements of a higher order than would otherwise be true, the economic traces while long range, may be no less significant.
>
> We, of course, know comparatively little about how students behave and the economic consequences of their behavior resulting from crediting prior learning....institutions wishing to make sound appraisals of the economics of their credit granting practices and policies should include in their studies a careful scrutiny of how the behavior of students has been affected.[9]

Coastline's total experience since opening in 1976 may not be sufficiently long range to justify a study of the type indicated by Valley. It is however, an attempt to establish the relationship between prior learning credit, student progress in subsequent courses taken and related costs.

[9]New Directions for Experiential Learning #7 Developing New Adult Clienteles by Recognizing Prior Learning--Prior Learning Credit Programs: Financial Impact on the College John R. Valley, Jossey Bass Inc. San Francisco, 1980 pp. 68, 69.

PROCEDURES

Records of all students who received experiential credit from 1976 to 1981 and those of a random selection of occupational students, selected from the spring 1981 enrollment, were selected to examine the questions stated in the introduction and investigate the given hypotheses.

The Sample

The experimental group of students, those who had received experiential credit in any form, were identified from the files of the graduation clerk who keeps records of such credit awards to students. Transcripts were then made of this group, 167 in total. Selection of a control group of students was more difficult. Since data was gathered from the transcripts of the experimental students as of Spring Semester 1981, it was decided to select an equal number of students from the same semester enrollment--on a random basis. Since the experimental group was "occupational," in that their experiential credit was in most cases their AA degree major, and not pursuing leisure activities or transfer objectives, the control group was also selected only from occupational students. Students were considered occupational if enrolled in at least one occupational course. These students were selected from a random selection of student I.D. numbers for the Spring '81 semester. The selection was done to insure that an equal number of students made up the control group as were in the experimental group. Transcripts of students in the control group were then examined for appropriate data.

Collection of Data

The following procedures were used in collecting the relevant data:

1. Copies of transcripts of students in both populations were obtained from the office of AG&IS.
2. Two occupational populations were determined and identified by

Procedures (continued)

differentiating those who had received experiential credit and those who did not.

3. A stratified random selection procedure was used to obtain the sample of students in the control group.
4. With the two sample groups selected, Grade point average of each student was determined and the total number in each group who completed an A.A. degree.
5. After the collection of all appropriate data, comparative analyses were calculated and the stated hypotheses were tested.

The comparative analyses focused on the following variables: 1) academic achievement 2) AA degree completion.

Treatment and Analysis of the Data

The mean GPA's, as representative of scholastic achievement, of both the experimental group and the control group were comparatively analyzed, and statistically tested for significance by using the critical ratio or z test for determining the significance of difference between two means. The z test was used because there was a sufficiently large sample in both groups.[10]

Hypotheses

Two null hypotheses were stipulated in the Method of Investigation, and the Background and Significance sections.

1. There is no significant difference between the sample academic achievement of those students who received experiential credit and comparable occupational students who did not.

[10]Wilson, John A.R., Robeck, Mildred, Michael William, Psychological Foundations of Learning and teaching. McGraw Hill, New York 1969, P. 551.

2. There is no significant difference between the AA degree completion rate of those students who received experiential credit and comparable occupational students who did not.

Basic Assumptions

A number of assumptions were made relevant to this study. Although not exhaustive, the basic assumptions were:

1. The sample groups selected are representative of the populations under investigation.
2. The student GPA's and AA degree completions obtained from the Admissions office is accurate.
3. Student group profiles can be determined by GPA's and AA degree completion rate.
4. The sample groups are similar in all variables such as sex, aptitude and educational goals. Only the controlled variable, experiential credit granted to members of the experimental group, distinguishes one group from the other.
5. The experimental group was "occupational" in that all accept CLEP, Credit by Exam, USAFI, and "other" was occupational, and such test credits were presumed used to meet general education requirements for an occupational AA degree.

Study Limitations

1. The two dependent variables selected for the study limit the scope and extensiveness of the investigation.
2. There was no testing of the samples to determine academic aptitude of students in both groups.
3. The student population of the experimental group was not taken from a single semester as was the control group. It was assumed that

since the criterion for selection of the control group of students was "occupational" status, it was immaterial whether the random sample was collected from one or 8 semesters of enrolled students.

4. Data collection was over a relatively short range of time for the nature of the study.

Definition of Terms:

The following definitions should better qualify the appropriate terms for the reader:

1. Coastline Community College: One of three community colleges in the Coast Community College District. Established as a non campus college in 1976 with an initial enrollment of 20,000 part-time and 400 full-time students of whom about 10% are transfer; 25% occupational and 65% General Interest.
2. Occupational Student: A student who has listed on of the occupational majors as his educational objective and who enrolled in at least one occupational class at Coastline.
3. Prior Learning: At Coastline, any learning which after assessment is found to be of a college level, learning was obtained prior to current college enrollment; may include course work at non-accredited institutions, or self-study.
4. Experiential Learning: Same as above but more general, includes work, military, travel, etc.--may or may not be of college level.
5. Assessment of Prior Learning: At Coastline, a system of awarding credit based on competencies which have been written, course by course, in a number of occupational certificate areas.
6. Licensure Credit: At Coastline, credit for possession of a valid

state or Federal license. The number of credits granted is based on total number of credits required at a California Community College to obtain the license.

7. Academic Achievement: This variable was defined as the sample group mean grade point average and it was calculated by dividing the sample group total number of graded units completed into the sample group total number of grade points.

8. AA Degree Completion: This variable was defined as the sample group mean of AA degrees completed.

9. Symbols and Formula: Certain symbols and one formula were used in the study. The following clarifies the appropriate terms:

P = probability of the level of confidence

N_1 = Experimental Sample

N_2 = Control Sample

Symbols defined

N_1, N_2 = numbers of individuals in sample 1 and 2, respectively

M_1, σ_1 = mean and standard deviation of first sample receiving treatment A

M_2, σ_2 = mean and standard deviation of second sample receiving treatment B

$\sigma_{M_1} = \frac{\sigma_1}{\sqrt{N_1-1}}$, estimate of standard error of mean of first sample, standard deviation of first sampling distribution--i.e., standard deviation of frequency distribution of means of an infinite number of samples randomly drawn from first population

$\sigma_{M_2} = \frac{\sigma_2}{\sqrt{N_2-1}}$, estimate of standard error of mean of second sample, standard deviation of second sampling distribution

$\sigma_{M_1-M_2} = \sqrt{\sigma_{M_1}^2+\sigma_{M_2}^2}$, estimate of standard error of differences between means, standard deviation of sampling distribution made up of differences between means of infinite number of pains of random samples

CR = $\bar{z}$ = critical ratio, standard score of sampling distribution of differences between pairs of sample means

Formula

$$z = \frac{M_1 - M_2}{\sigma_{M_1 - M_2}}$$

$$= \frac{M_1 - M_2}{\sqrt{\sigma_{M_1}^2 + \sigma_{M_2}^2}}$$

RESULTS AND DATA ANALYSIS

A detailed procedure was used to obtain the necessary data to conduct the study. The following is an analysis of the data, the stated hypothesis and results:

Analysis of Data: Tables III and IV display the data gathered from the two sample groups. Table V is a summary of the data for both sample Groups:

Table V

Comparison of Mean GPA's of Experimental and Control Group Samples

Sample	Graded Units Attempted	Total Grade Points	Mean GPA
N_1	2,954	9,936	3.36
N_2	2,537.50	8,709.50	3.43

Table V reveals that the sample groups were homogeneous in terms of academic achievement. The significance of the existing difference in Mean GPA is discussed below:

Table VI is a comparison of the total AA degrees awarded, students in the two samples, and a summary of the data in terms of Mean rate of AA degree completion.

Table VI

AA degree completion rate of Experimental and Control Group Samples:

Sample	Number of Students	AA degrees	Mean per Student
N_1	167	51	.305
N_2	167	7	.041

Analysis of the Hypotheses:

The results of the statistical analyses for each hypothesis are presented below. Acceptance or rejection of the hypotheses was based on the statistical findings.

Null Hypothesis #1: There is no significant difference between the academic achievement of those students who received experimental credit and comparable occupational students who did not. A Critical Ratio z test of significance was applied to determine if there was any significant difference between the sample means and grade point average (academic achievement). Results of the z test revealed a calculated value of .53 which was smaller than the critical z value of 1.96 at the .05 level of confidence. Therefore the null hypothesis was accepted as there was no significant difference between the sample means. Thus it can be concluded that for this study and sample groups, students who received credit for experiential learning do not attain at a significantly higher level of academic achievement than comparable students who do not receive experiential credit. The relevant data are shown in table VII.

Table VII

Comparison of Group Mean GPS's

Sample	Number of Students	GPA Mean	z test value
N_1	167	3.36	.53
N_2	167	3.43	

$z < 1.96$, $P > .05$

Null Hypothesis #2: There is no significant difference between the AA degree completion rate of those students who received experiential credit and comparable occupational students who did not.

It can be seen by inspection of the data that in Table VI an important difference exists in the AA degree completion rate of the two samples. Without further statistical analysis it can be seen that about one person in three received an AA degree at the time of the investigation; while for the control group only one person in 24 received the degree. It can be concluded that for this study and these sample groups, students receiving experiential credit earn a significantly higher number of AA degrees than comparable students who do not receive such credit.

Summary, Discussion, Implications and Recommendations

The purpose of this study was to research and evaluate two different student populations in an effort to find out if one student population performs academically less, equal, or better than the second and if the treatment of the first student group is financially cost effective. The populations were drawn from the Spring 1980-81 semester student records in Coastline Community College's Admissions office. The students who fulfilled the following criteria were considered for the study: 1) for the experimental group, all students who had received experiential credit and had also enrolled in subsequent courses at Coastline, 2) for the control group, a random sample of students enrolled in the Spring '81 semester who had enrolled in at least one occupational course. Each group was made up of one hundred and sixty-seven students.

Two null hypotheses were constructed to pursue the necessary research. The awarding of experiential credit was treated as the independent variable while academic achievement, as defined as grade point average and AA degree completion rate were treated as the dependent variables. A z test of significance at the .01 level of confidence was used to statistically analyze the

hypotheses. For related research on the cost effectiveness of awarding experiential credit, data on the cost per unit of credit awarded in the various methods was gathered and presented.

Tables III and IV display the data on which much of the study was based. It is interesting to note that the two groups are similar in the number of units completed at Coastline. (in the case of the experimental groups, the number of units completed subsequent to receiving experiential credit). More interesting is the difference in the mean age of the two groups. The mean age was 43 for the experimental group and 39.03 for the control group. The data corroborates the assumption that those who qualify for experiential credit are older adults.

Analysis and interpretation of the data and hypotheses revealed the following findings:

1. There was no significant difference in academic achievement as reflected by grade point averages, between the occupational students who received experiential credit and those who did not.
2. There was a significant difference in AA degree completion between the occupational students who received experiential credit and those who did not.
3. The cost per unit of awarding the experiential credit was far below the cost $73.00 per unit for earning credit by traditional means in all but one method, ranging from $.05 per unit to $1.00 per unit. The cost per unit for Coastline's assessment of prior learning system, because of developmental costs was $64.00 per unit and diminishing as the developed materials receive wider use.

Implications

Implications which can be drawn from the findings of the study are:

1. Students who received credit for experiential learning perform as well as regular students when comparing the grade point average

TABLE III -- EXPERIMENTAL GROUP

Age #	Grade Units	GPA	Grade Pts	Age #	Grade Units	GPA	Grade Pts	Age #	Grade Units	GPA	Grade Pts	Age #	Grade Units	GPA	Grade Pts
42- 1	12.0	3.0	36.0	55-43	21.0	3.57	75.0	53-85	14.0	3.79	53.0	45-127	38.0	3.92	149.0
53- 2	9.0	3.67	33.0	60-44	25.0	2.60	65.0	31-86	8.0	3.63	29.0	45-128	9.0	2.44	22.0
67- 3	2.0	4.0	8.0	48-45	48.0	3.69	177.0	56-87	18.0	4.0	72.0	38-129	15.0	3.60	54.0
25- 4	8.0	3.13	25.0	28-46	3.0	3.60	9.0	54-88	4.5	4.0	18.0	37-130	3.0	3.36	12.0
61- 5	1.5	3.0	4.5	43-47	14.0	3.79	53.0	34-89	31.0	3.61	112.0	25-131	20.0	3.55	71.0
32- 6	3.0	3.0	9.0	41-48	19.0	3.11	59.0	51-90	8.0	3.0	24.0	33-132	12.0	2.75	33.0
33- 7	4.0	3.0	12.0	50-49	50.0	3.02	151.0	67-91	24.0	3.46	83.0	25-133	17.0	2.47	42.0
34- 8	8.5	3.29	28.0	67-50	7.0	3.86	27.0	31-92	41.0	3.76	154.0	56-134	12.0	2.25	27.0
30- 9	3.0	3.0	9.0	55-51	14.0	3.0	45.0	52-93	17.0	3.53	60.0	31-135	31.5	3.43	108.0
48-10	22.0	3.09	68.0	49-52	17.0	3.41	58.0	51-94	40.0	3.85	154.0	35-136	7.0	3.14	22.0
41-11	8.0	4.0	32.0	72-53	4.0	3.0	12.0	47-95	12.0	4.0	48.0	38-137	7.0	3.43	24.0
40-12	16.0	3.13	50.0	41-54	1.0	2.0	2.0	45-96	14.0	3.57	50.0	35-138	14.0	4.0	33.0
46-13	12.0	3.17	38.0	36-55	16.0	3.75	60.0	30=97	27.0	37.0	100.0	37-139	4.0	2.36	6.0
43-14	33.0	3.91	129.0	44-56	48.0	3.81	183.0	61-98	37.0	3.22	119.0	44-140	15.0	3.20	48.0
47-15	40.0	3.46	140.0	41-57	11.0	3.82	42.0	30-99	6.0	3.0	18.0	36-141	8.0	3.63	29.0
41-16	15.0	3.60	54.0	39-58	16.0	3.25	52.0	25-100	47.0	3.32	156.0	37-142	13.5	3.67	49.5
45-17	24.0	3.75	90.0	35-59	45.0	2.33	105.0	46-101	3.0	3.0	9.0	29-143	33.0	3.27	108.0
34-18	18.0	3.83	69.0	34-60	28.0	3.79	106.0	44-102	3.0	2.0	6.0	30-144	27.0	3.38	81.0
39-19	3.0	3.0	9.0	36-61	18.0	4.0	72.0	42-103	1.5	4.0	6.0	29-145	3.5	4.0	14.0
78-20	7.5	3.33	25.0	50-62	14.0	3.43	48.0	30-104	8.0	2.25	18.0	37-146	5.0	3.0	15.0
29-21	10.0	3.70	37.0	56-63	20.0	4.0	80.0	30-105	2.5	4.0	10.0	58-147	19.0	3.68	70.0
43-22	21.0	3.62	76.0	66-64	9.5	3.68	35.0	44-106	5.0	2.0	10.0	41-148	26.0	3.35	87.0
34-23	6.0	2.50	15.0	41-65	41.0	3.85	158.0	36-107	12.0	2.75	33.0	28-149	9.0	3.33	30.0
46-24	2.0	2.0	4.0	29-66	18.0	3.39	61.0	36-108	3.0	4.0	12.0	64-150	3.0	4.0	12.0
39-25	30.0	3.47	104.0	35-67	43.5	3.15	137.0	41-109	13.5	2.89	39.0	35-151	4.0	4.0	16.0
40-26	23.0	3.91	90.0	54-68	31.5	3.25	102.5	42-110	9.0	2.67	24.0	27-152	3.0	2.0	6.0
31-27	33.0	2.73	90.0	53-69	13.0	3.0	39.0	45-111	16.0	3.69	59.0	42-153	6.0	2.0	12.0
39-28	17.0	3.65	62.0	42-70	17.0	2.94	50.0	50-112	8.0	3.75	30.0	46-154	12.0	2.75	33.0
54-29	40.0	3.48	139.0	38-71	3.0	3.67	11.0	51-113	3.0	3.0	9.0	49-155	12.0	3.58	43.0
39-30	40.0	3.93	157.0	50-72	9.0	3.0	27.0	29-114	18.0	3.17	57.0	41-156	6.0	4.0	24.0
37-31	22.0	3.27	72.0	41-73	31.0	3.16	98.0	46-115	6.0	2.50	15.0	27-157	15.0	2.60	39.0
49-32	2.0	3.0	6.0	53-74	2.0	3.0	6.0	34-116	29.0	3.55	103.0	57-158	12.0	3.50	42.0
34-33	18.0	3.17	57.0	35-75	28.0	3.46	97.0	52-117	18.0	3.76	66.0	48-159	7.0	4.0	28.0
53-34	35.0	2.71	95.0	41-76	32.0	3.75	120.0	53-118	15.0	3.0	45.0	40-160	12.0	3.75	45.0
37-35	16.0	4.0	64.0	48-77	11.0	3.73	41.0	46-119	49.0	3.45	169.0	40-161	45.0	3.27	81.0
34-36	22.0	3.14	69.0	50-78	57.5	3.08	177.0	61-120	12.0	3.75	45.0	42-162	16.5	4.0	66.0
50-37	29.5	3.29	97.0	56-79	16.0	3.14	51.0	70-121	11.5	3.91	45.0	43-163	9.0	3.33	33.0
32-38	31.0	3.74	116.0	50-80	50.5	3.25	164.0	47-122	1.0	4.0	4.0	39-164	39.0	2.67	133.0
44-39	11.0	3.18	35.0	54-81	40.0	3.40	136.0	48-123	14.5	2.90	42.0	27-165	14.5	3.3	49.0
32-40	32.5	3.63	118.0	34-82	19.5	3.13	61.0	45-124	29.0	3.14	91.0	53-166	9.0	4.0	33.0
51-41	33.0	2.94	97.0	53-83	16.0	3.75	60.0	25-125	18.0	3.67	66.0	67-167	2.0	3.0	8.0
33-42	27.0	2.81	76.0	42-84	9.0	3.33	18.0	45-126	31.0	3.68	114.0				

TOTAL UNITS 2954 TOTAL GPA's 9936

Mean Age 43 MEAN GPA 3.36

Mean Units 16.95

TABLE IV--CONTROL GROUP

Age #	Grade Units	GPA	Grade Pts	Age #	Grade Units	GPA	Grade Pts	Age #	Grade Units	GPA	Grade Pts	Age #	Grade Units	GPA	Grade Pts
40- 1	13.0	4.0	52.0	46-45	6.0	4.0	24.0	33-89	2.0	4.0	8.0	50-133	53.0	3.08	163
58- 2	12.0	4.0	48.0	46-46	21.0	3.71	78.0	33-90	3.0	4.0	12.0	42-134	4.0	3.0	12
27- 3	3.0	2.0	6.0	52-47	24.0	3.25	78.0	56-91	2.0	4.0	8.0	41-135	6.0	3.0	24
29- 4	4.0	3.25	13.0	32-48	3.0	3.0	9.0	32-92	10.0	3.0	30.0	30-136	9.0	4.0	36
23- 5	20.0	2.45	59.0	34-49	6.0	3.50	21.0	58-93	2.0	4.0	8.0	28-137	4.0	4.0	16
25- 6	25.5	3.65	93.0	68-50	21.0	3.57	75.0	33-94	5.0	4.0	20.0	36-138	4.0	4.0	16
31- 7	8.0	3.13	25.0	37-51	6.0	2.0	12.0	29-95	10.0	2.30	23.0	50-139	42.0	4.0	136
37- 8	45.0	3.40	153.0	32-52	9.0	3.33	30.0	38-96	23.0	3.04	70.0	31-140	4.0	3.24	16
28- 9	56.0	3.79	212.0	43-53	22.0	3.73	82.0	49-97	9.0	3.0	27.0	40-141	4.0	4.0	12
32-10	48.0	3.42	164.0	19-54	52.0	3.19	166.0	46-98	5.0	3.40	17.0	53-142	7.0	3.0	28
28-11	49.0	3.39	166.0	51-55	5.0	3.40	17.0	37-99	9.0	4.0	36.0	25-143	8.0	4.0	28
28-12	38.0	3.50	133.0	44-56	10.0	4.0	40.0	35-100	2.0	4.0	8.0	59-144	12.0	3.5	40
31-13	22.0	3.27	72.0	39-57	9.0	4.0	36.0	63-101	7.0	3.57	25.0	47-145	4.0	3.33	16
37-14	36.0	3.83	138.0	56-58	10.0	3.60	36.0	25-102	7.0	4.0	28.0	28-146	21.0	4.0	84
29-15	9.0	3.33	30.0	43-59	8.0	3.50	28.0	44-103	7.0	3.14	22.0	61-147	9.0	4.0	30
31-16	11.0	2.82	31.0	32-60	4.0	3.0	12.0	26-104	7.0	2.86	20.0	29-148	15.0	4.0	60
36-17	30.0	3.80	114.0	42-61	4.0	3.0	12.0	61-105	5.0	3.40	17.0	32-149	16.0	3.0	48
57-18	24.0	4.0	96.0	36-62	15.	4.0	6.0	61-106	8.0	4.0	32.0	36-150	8.0	4.0	32
34-19	6.0	3.50	21.0	33-63	1.5	4.0	6.0	30-107	5.0	1.60	8.0	43-151	16.0	3.44	55
60-20	25.0	3.52	88.0	63-64	14.5	3.45	50.0	24-108	10.0	2.70	27.0	52-152	6.0	2.50	15
32-21	57.0	3.02	172.0	31-65	38.5	2.65	102.0	21-109	4.0	4.0	16.0	28-153	35.0	3.69	129
41-22	7.0	2.86	20.0	30-66	37.5	3.36	126.0	33-110	6.0	3.83	23.0	31-154	51.0	3.41	174
37-23	9.0	4.0	36.0	54-67	28.5	3.79	108.0	54-111	14.0	3.57	50.0	31-155	10.0	3.0	30
29-24	14.5	2.62	38.0	48-68	25.0	2.94	73.5	42-112	13.0	3.92	51.0	31-156	13.0	3.54	46
34-25	6.0	3.50	21.0	37-69	27.0	4.0	108.0	23-113	8.0	2.50	20.0	31-157	4.0	4.0	16
59-26	3.0	2.0	6.0	48-70	11.5	4.0	46.0	61-114	2.0	4.0	8.0	22-158	28.0	3.68	103
31-27	9.0	3.67	33.0	49-71	15.0	3.60	54.0	21-115	36.0	2.85	102.5	36-159	15.5	4.0	62
34-28	27.0	3.67	99.0	52-72	13.5	3.67	49.5	32-116	51.0	2.86	146.0	43-160	20.0	3.65	73
34-29	3.0	4.0	12.0	28-73	19.5	2.77	54.0	36-117	4.0	2.0	8.0	29-161	8.0	3.50	28
38-30	17.5	3.2y	57.0	49-74	25.5	3.71	94.5	29-118	13.0	3.15	41.0	41-162	4.0	4.0	16
47-31	25.0	3.04	76.0	58-75	1.5	4.0	6.0	52-119	12.0	3.67	44.0	35-163	37.0	3.62	134
59-32	25.0	3.76	94.0	34-76	16.5	3.82	63.0	34-120	25.0	3.60	90.0	45-164	4.0	3.0	12
26-33	29.0	3.38	98.0	51-77	13.5	3.67	49.5	41-121	4.0	3.0	12.0	46-165	15.0	3.80	57
50-34	46.5	3.38	157.0	31-78	7.5	3.80	28.5	22-122	4.0	3.0	12.0	46-166	10.0	3.60	36
44-35	21.0	2.86	60.0	29-79	30.5	3.80	116.0	38-123	4.0	4.0	16.0	45-167	3.0	3.0	9
37-36	19.0	2.68	70.0	47-80	10.5	4.0	42.0	30-124	4.0	4.0	16.0				
47-37	27.0	3.22	87.0	24-81	4.5	3.67	16.5	42-125	16.0	3.25	52.0				
31-38	9.0	3.67	33.0	37-82	16.5	3.64	60.0	52-126	19.5	3.59	70.0				
26-39	5.0	3.40	17.0	33-83	1.5	3.0	4.5	40-127	16.0	4.0	64.0				
49-40	20.0	3.60	72.0	62-84	51.5	3.65	188.0	42-128	7.0	4.0	28.0				
44-41	9.0	3.33	30.0	22-85	16.5	2.91	48.0	54-129	16.0	4.0	64.0				
55-42	4.0	4.0	16.0	27-86	4.5	2.67	12.0	34-130	8.0	4.0	32.0				
52-43	12.0	4.0	48.0	22-87	2.0	4.0	8.0	29-131	4.0	3.0	12.0				
48-44	30.5	3.89	118.5	27-88	20.0	9.0	18.0	27-132	4.0	4.0	16.0				

TOTAL UNITS 2537.50

TOTAL GPA's 8709.50

Mean Age 39.03

MEAN GPA 3.43

Mean Units 15.2

of regular students.

2. Students who receive credit for experiential learning, complete AA degrees at a significantly higher rate than do regular students.
3. Students who receive credit for experiential learning are, therefore as capable academically as regular students, and in addition, are evidently more goal oriented, have more appropriate educational plans and know how to incorporate their prior learning in their educational plan.
4. In consideration of the low cost per unit of experiential credit awarded at Coastline, the service to students of awarding experiential credit is significantly cost effective--both in terms of student costs and in terms of cost to the community.
5. Given Coastline's adequate quality control over systems for granting credit for prior learning, there should be no compunctions against awarding students appropriate credit and granting them advanced standing, because such students are of the same academic capability as regular students and have other commendable qualities that will result in a positive reflection on the institution.
6. The older student needs to complete his degree more rapidly, in order to make use of it in employment. Awarding experiential credit helps to satisfy that need.

Recommendations

The following recommendations should be considered based on the findings of the study, as they will allow for a more detailed and complete investigation of the null hypotheses:

1. Factors other than GPA and AA degree completion rate should be included in the measure of academic ability.

2. The hypotheses in the study should be tested with student populations selected on the basis of stricter criteria than "occupational" or "experiential credit recipients."
3. A longitudinal study should be conducted and the number of variables (i.e., educational objective, age, sex, academic aptitude, race, etc. should be increased.
4. The question of whether awarding experiential credit was the inducement to a significant number of students to return to college and obtain a degree needs to be researched.
5. The cost effectiveness of granting experiential credit needs to be investigated in an institution which uses the traditional methods of granting credit through portfolio writing. This research should include both sponsored and unsponsored experiential learning.
6. Research should be conducted on why faculties set policies in opposition to granting credit for experiential learning.

Potential For More Extensive Service to Students

This study was conducted partly as a periodic research report by the AG&IS office at Coastline to verify and research some of the assumptions on which the granting of experiential credit was based. It was also partly prompted by the League for Innovation's Project on Productivity. In either case the results warrant further efforts by Coastline in awarding experiential credit for at least three reasons:

1. The students who are presently receiving experiential credit have obviously been able to enhance their careers through accelerating their educational program past those areas of learning which they have already mastered.

2. There are undoubtedly many individuals who because of reticence or lack of knowledge about opportunity for experiential credit are not taking advantage of the service and returning to college to complete a degree program. More intensive contacts will be made with appropriate individuals in business and industry in order to open avenues for potential students to use their prior learning as part of a degree program.

3. The advantage to students, in time and money, gained through receiving experiential credit is worth more than passing comment. The 3,731 units awarded Coastline students for experiential learning represents hours saved in tens of thousands. A proportional amount of dollars was also saved by students. The cost to Coastline for granting the units was about 12,800; 8,800 of which was funded grant (Chancellor's Innovative Programs.) The cost for awarding that many units through traditional classroom approaches would be $272,463. Further expansion of awarding credit for experiential learning would appear to be warranted.

Results of the study will be made available to the League for Innovation, the Council for the Advancement of Experiential Learning (CAEL), Educational Resources Information Center (ERIC) clearing house at UCLA, and local district personnel.

BIBLIOGRAPHY

1. American Association of State Colleges and Universities, Resource Center for Planned Change, Programs for New Clientele, Washington D.C.: Author, 1977.

2. Chickering, A.W. Developmental Change as a Major Outcome. In M.T. Keeton and Associates, Experimental Learning: Rationale, Characteristics and Assessment. San Francisco: Jossey--Bass, 1976.

3. Coastline Community College, AG&IS, Assessment of Prior Learning--Progress Report and Recommendations. Unpublished Report 1981.

4. Knowles, M.S. The Modern Practice of Adult Education: Andragogy Versus Pedagogy. New York Association Press, 1970.

5. Knox, Alan B. Adult Development and Learning, Jossey--Bass, San Francisco, 1977.

6. Valley, John R., New Directions for Experiential Learning #7 Developing New Adult Clienteles by Recognizing Prior Learning--Prior Learning Credit Programs: Financial Impact on the College, Jossey Bass Inc. San Francisco, 1980 pp. 68, 69.

7. Wilson, John A. R., Robeck, Mildred, Michael William, Psychological Foundations of Learning and Teaching. McGraw Hill, New York 1969, P. 551.

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